DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 13.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-011656
Date Inspected: 25-Jan-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Oregon Iron Works Clackamas, Or.

OSM Arrival Time: 700
OSM Departure Time: 1530
Location: Clackamas, OR

CWI Name: M. Gregson, J. Salazar

Inspected CWI report:	☐	**Yes**	☑	**No**	☐	**N/A**
Electrode to specification:	☑	**Yes**	☐	**No**	☐	**N/A**
Qualified Welders:	☑	**Yes**	☐	**No**	☐	**N/A**
Approved Drawings:	☑	**Yes**	☐	**No**	☐	**N/A**

CWI Present:	☑	**Yes**	☐	**No**		
Rod Oven in Use:	☐	**Yes**	☐	**No**	☑	**N/A**
Weld Procedures Followed:	☑	**Yes**	☐	**No**	☐	**N/A**
Verified Joint Fit-up:	☑	**Yes**	☐	**No**	☐	**N/A**
Approved WPS:	☑	**Yes**	☐	**No**	☐	**N/A**
Delayed / Cancelled:	☐	**Yes**	☑	**No**	☐	**N/A**

Bridge No: 34-0006
Component: Hinge K Pipe Beams

Summary of Items Observed:

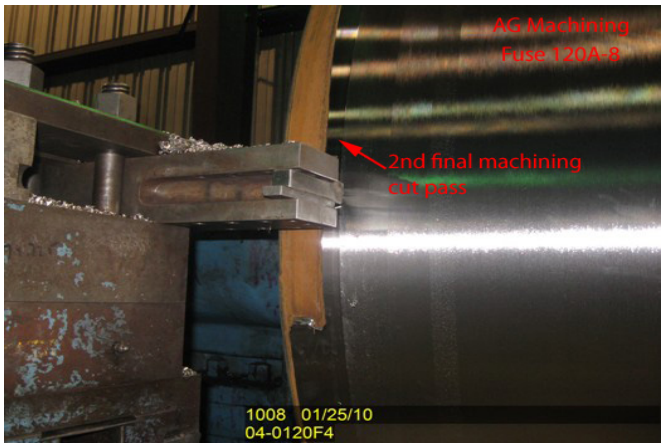
The Quality Assurance Inspector Sean Vance arrived on site at Oregon Iron Works, Inc (OIW) in Clackamas, OR, to randomly observe the in process welding of the Hinge K Pipe Beam assemblies. The QA Inspector arrived on site to randomly observe the OIW Quality Control (QC) Inspectors in process and completed visual and nondestructive testing. Upon the arrival of the QA Inspector the following observations were made:

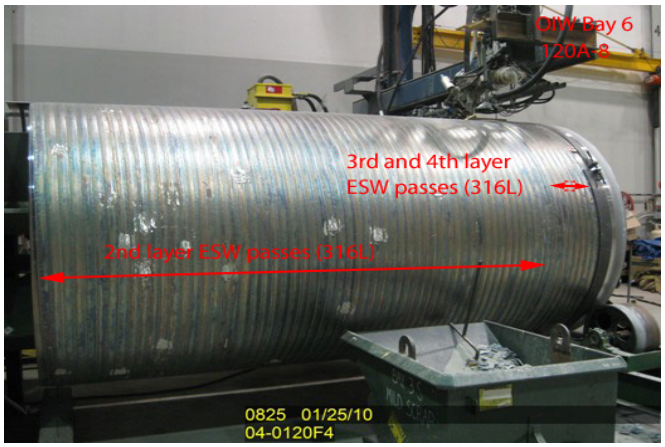
AG Machining (Boring, OR)
On this date, the QA Inspector arrived at AG Machine shop, to witness the final machining of the Fuse 120A-5. The QA Inspector met with the AG Machinist and AG explained that he was in process of setting up for the second cut pass, for final machining. The QA inspector witnessed AG performing an outside measurement on the circumference of the Fuse. The AG Machinist then explained to the QA Inspector that the cutting depth will be set to remove approximately 1 mm of overlay material and that this cut pass will machine the Fuse to approximately 1921 mm final outside diameter. AG then explained that an additional third cut pass will possibly be needed, for a final finish cut and then the final honing will be started, after completion of the cutting passes. The QA Inspector later witnessed AG start the second cut pass on the Fuse, as shown in pictures below. The QA Inspector noted that the contract requires a final outside diameter finish of 1920mm (+/1mm) with a surface finish of .8 µm.

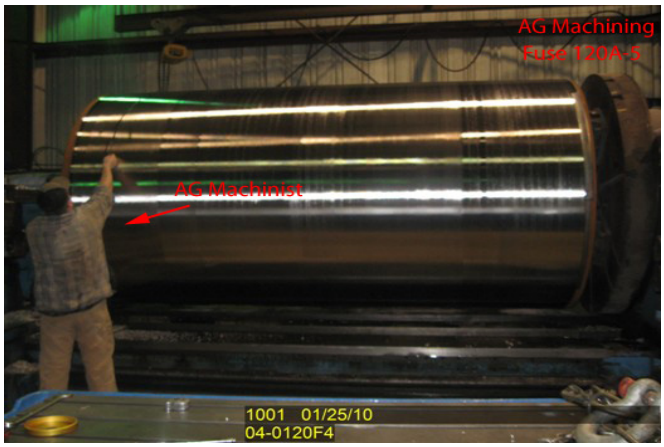
OIW Fabrication Shop-Bay 6 (ESW Overlay Process)
Hinge-K Pipe Beam Fuse Assembly 120A-8
The QA Inspector was informed by QC Inspector Jose Salazar that the electroslag welding (ESW) will remain idle on this fuse, until OIW receives additional shipment of flux. The QA Inspector noted that OIW had previously

deposited eight ESW passes on the third layer and a fourth layer was previously deposited. QC Inspector Salazar explained to the QA Inspector that the OIW production lead, Troy Smith, had measured the outside circumference of the Fuse and instructed WID #F17, Mr. Igor Frolov to add an additional ESW layer. QC Inspector Salazar explained that there was a concern, after the circumferential measurements on the Fuse were taken, that there would not be enough overlay material to machine to the required final finish tolerance. The QA Inspector noted that the contract requires a final outside diameter finish of 1920 mm (+/1mm), with a minimum of 5 mm overlay thickness. See pictures below.

Material, Equipment, and Labor Tracking (MELT)
QA Inspector Sean Vance performed a verification of material, personnel and equipment involved with the project.
The QA Inspector observed at Oregon Iron Works: 2 OIW production personnel and 2 QC Inspectors.
The QA Inspector observed at AG Machine shop: 1 AG Machinist and 1 AG Supervisor.







Summary of Conversations:
As noted above.
Comments
This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mohammad Fatemi (916) 813-3677, who represents the Office of Structural Materials for your project.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

Inspected By:	Vance,Sean	Quality Assurance Inspector
Reviewed By:	Adame,Joe	QA Reviewer